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4.0 Overview of Coastal Pelagic Species Fisheries and their Management

Dale Sweetnam, Fisheries Resources Division

- Brief description of West Coast CPS fisheries,
- Changes in management with SWFSC CPS assessment responsibilities,
- Identify collaborators and clients of the Pacific Fisheries Management Council CPS assessments.





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Species in the CPS Fishery Management Plan and SWFSC responsibilities:

Actively Managed Species

- **Pacific Sardine** - Assessed annually
- **Pacific Mackerel** - Assessed annually moving to every 4 years (2015, 2019) June 2013 PFMC

Monitored Species – Low fishing pressure, rotating assessment schedule

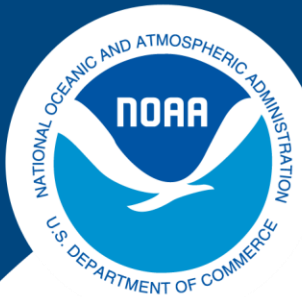
- **Jack Mackerel**
- **Northern Anchovy , Northern Subpopulation**
- **Northern Anchovy, Central Subpopulation**
- **Market Squid** - CA State Managed Fishery, Large fishery but falls out of full MSRA management consideration due to <1 year life-span

Prohibited Species

- **Krill** – Prohibited fishery

Ecosystem Component Species – Pacific Herring, Jacksmelt – Monitored for by-catch in CPS fisheries



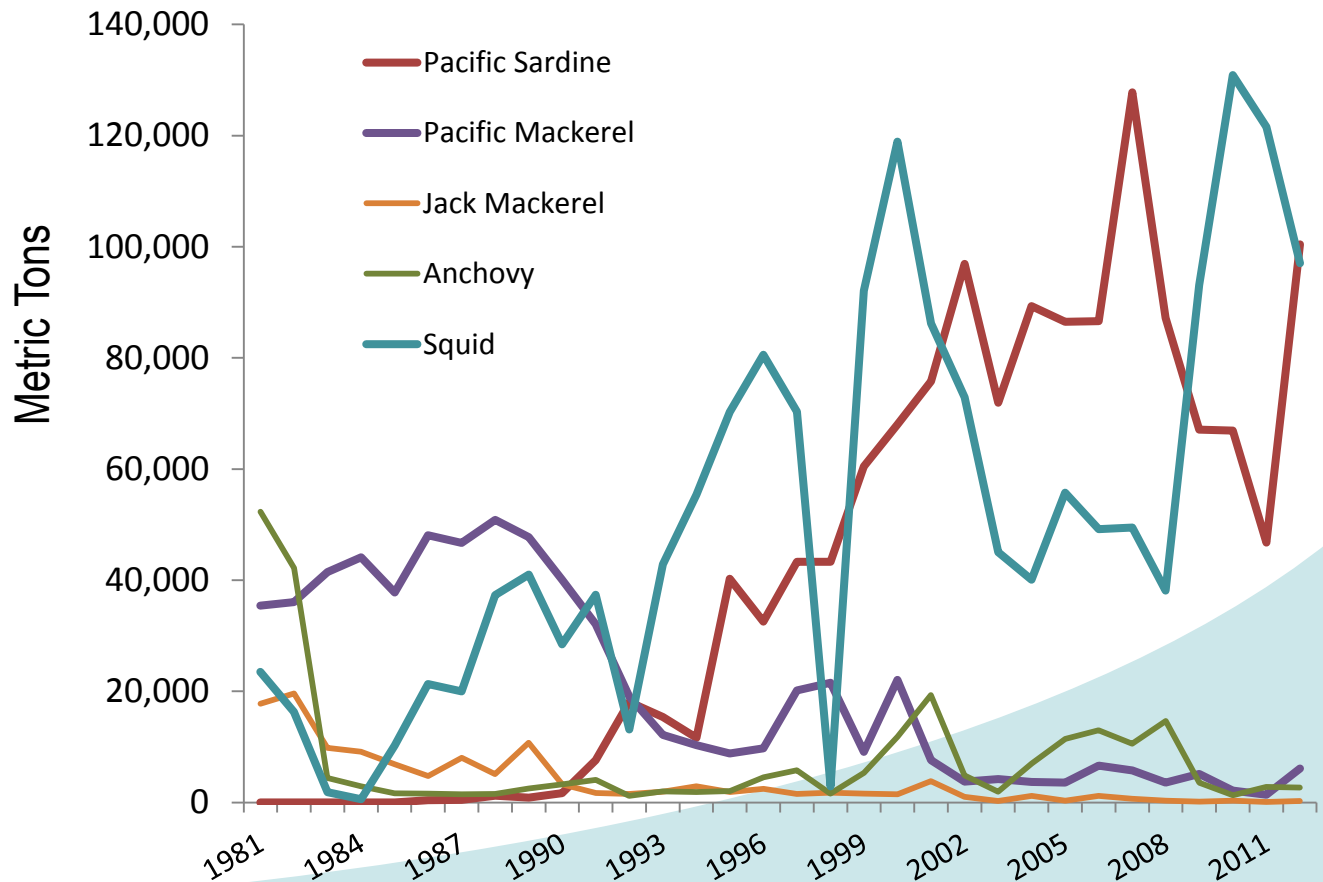


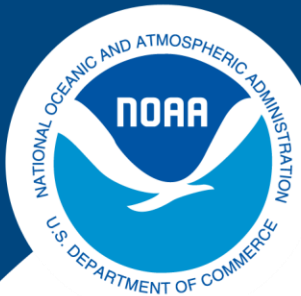
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Species in the CPS Fishery Management Plan and the SWFSC responsibilities:

West coast CPS landings (metric tons) by species, 1981-2012.





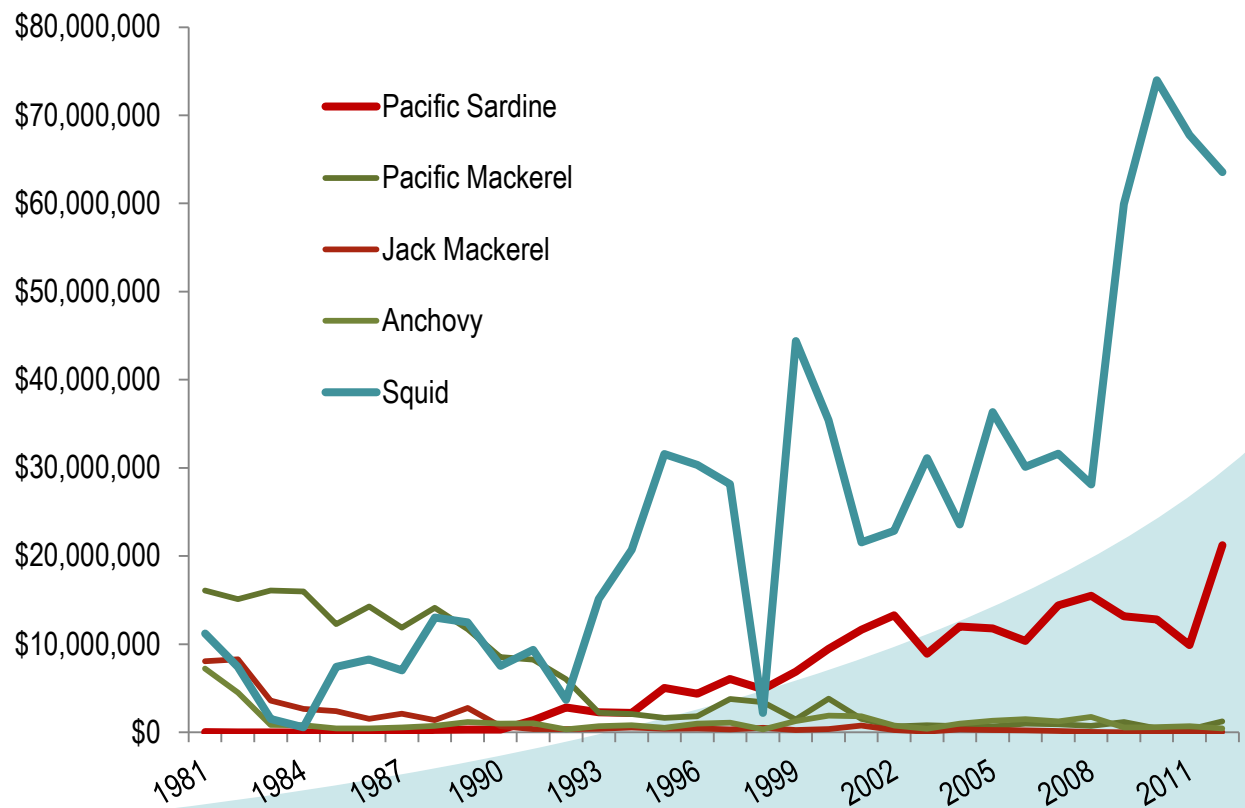
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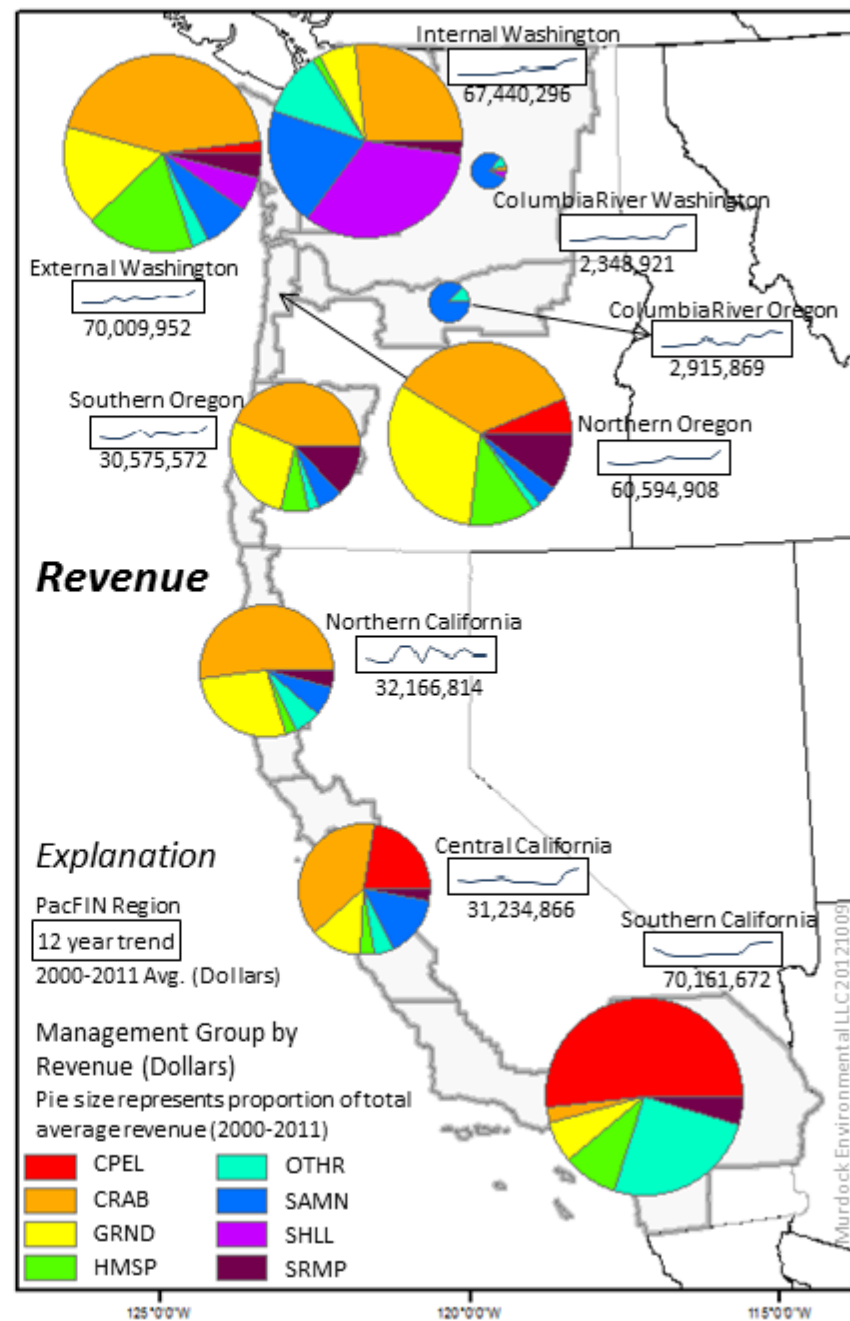
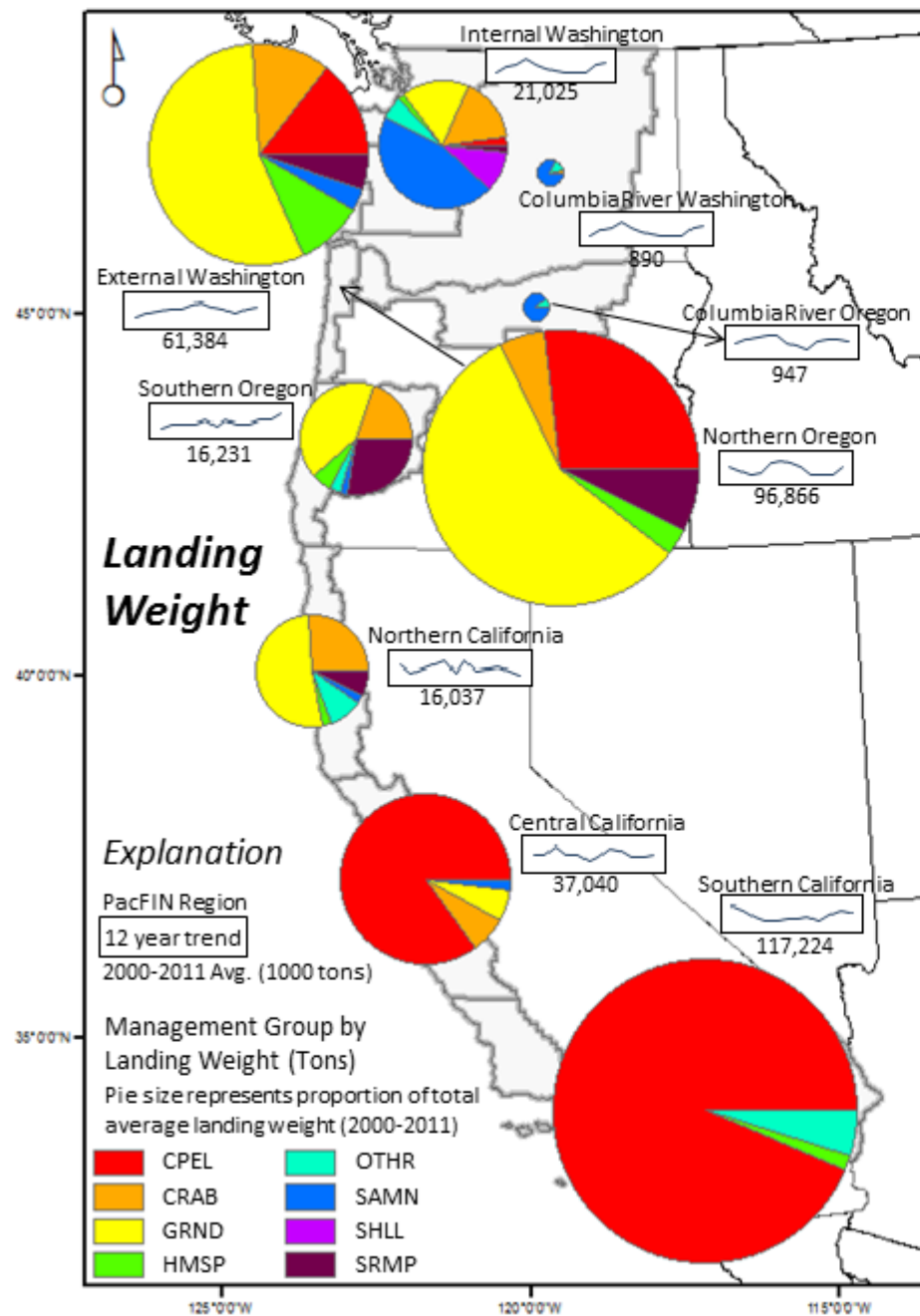
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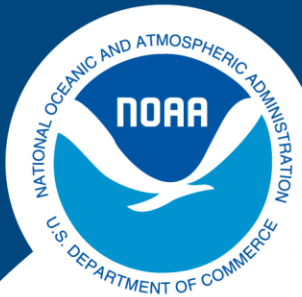
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West coast CPS exvessel revenues (2012\$) by species, 1981-2012.







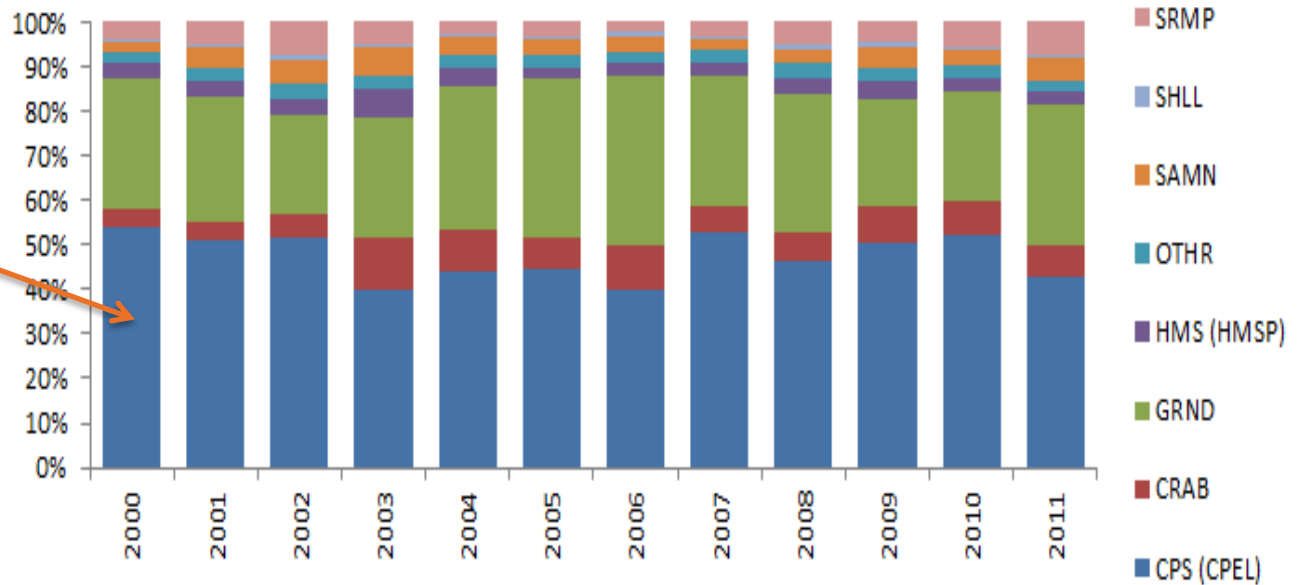
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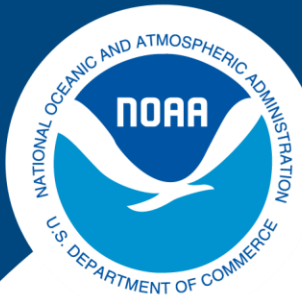
Species in the CPS Fishery Management Plan and the SWFSC responsibilities:

Pacific Coast Fishery Ecosystem Plan, 2013 PFMC

CPS Fisheries
comprise 48%
of Total US West
Coast Landings

Figure 3.4.3: Percentage of total U.S. west coast commercial landings by PacFIN management group, 2000-2011.





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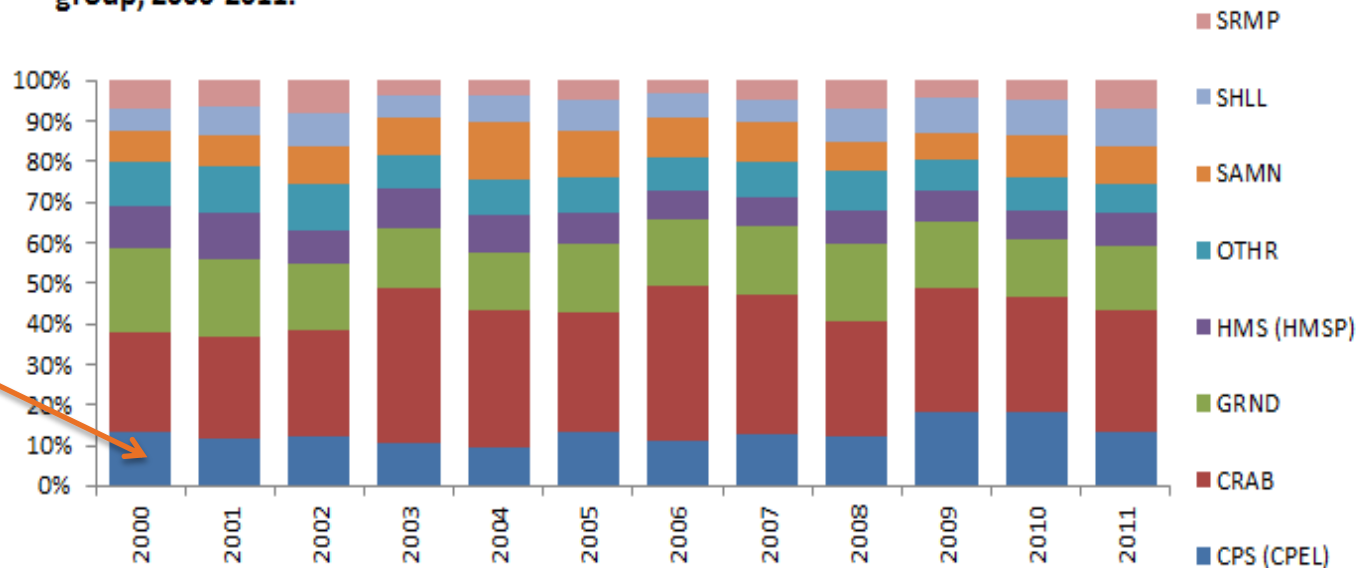
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Species in the CPS Fishery Management Plan and the SWFSC responsibilities:

Pacific Coast Fishery Ecosystem Plan, 2013 PFMC

But account for
only 10-14%
of Total US West
Coast Revenues

Figure 3.4.4: Percentage of total U.S. west coast exvessel revenues by PacFIN management group, 2000-2011.



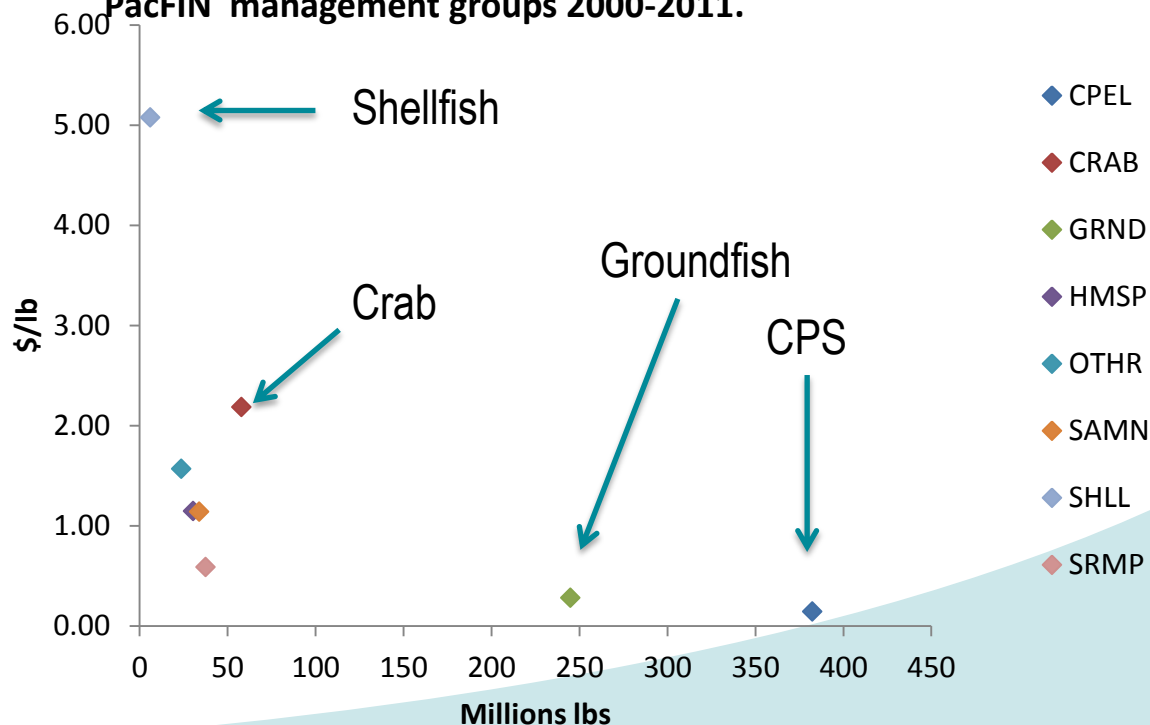


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Species in the CPS Fishery Management Plan and the SWFSC responsibilities:

Pacific Coast Fishery Ecosystem Plan, 2013 PFMC

Figure 4.9. Average ex-vessel price (\$/lb) by average landings (lbs) for PacFIN management groups 2000-2011.





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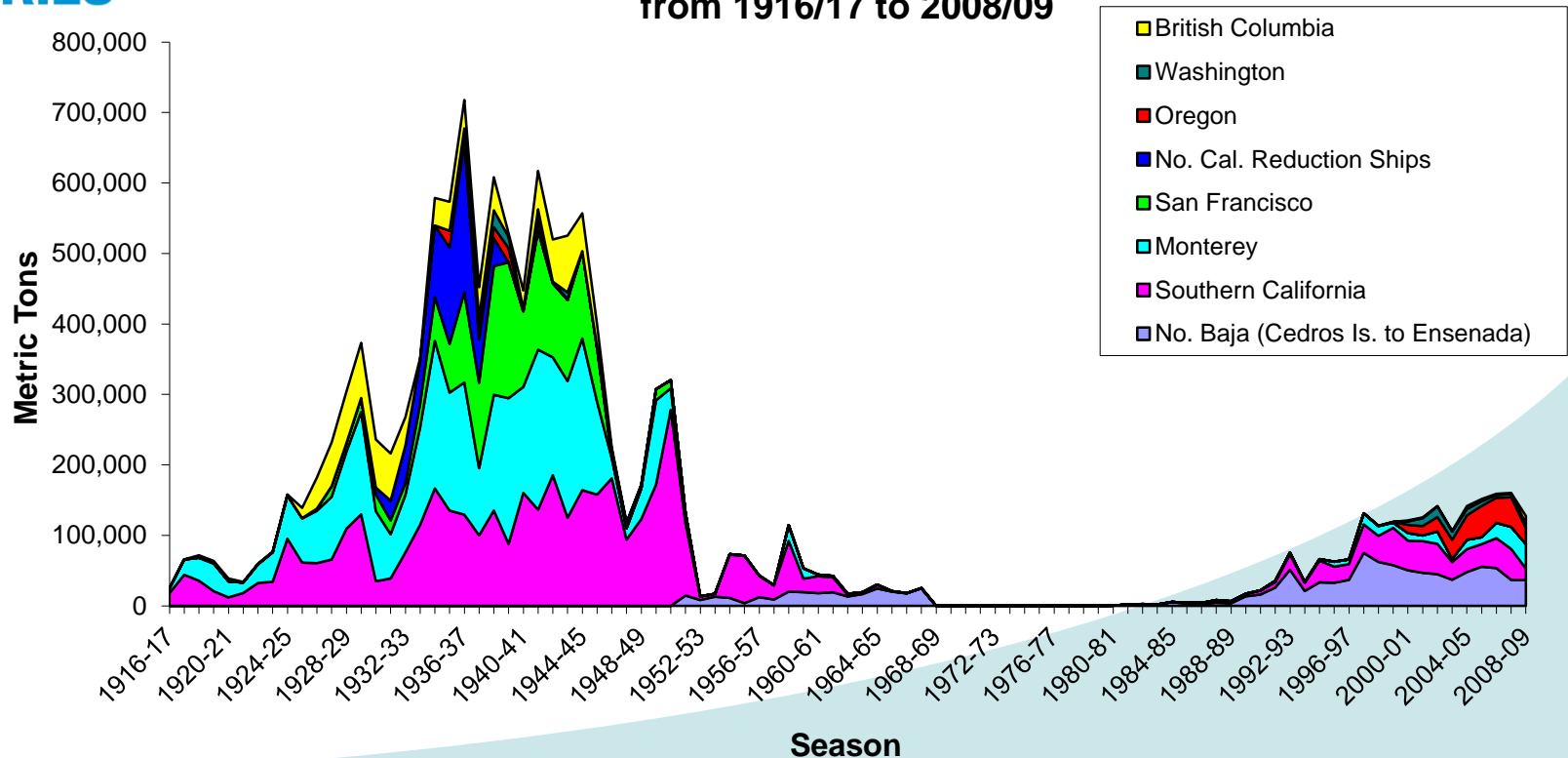
A Brief History of the West Coast Sardine Fishery:

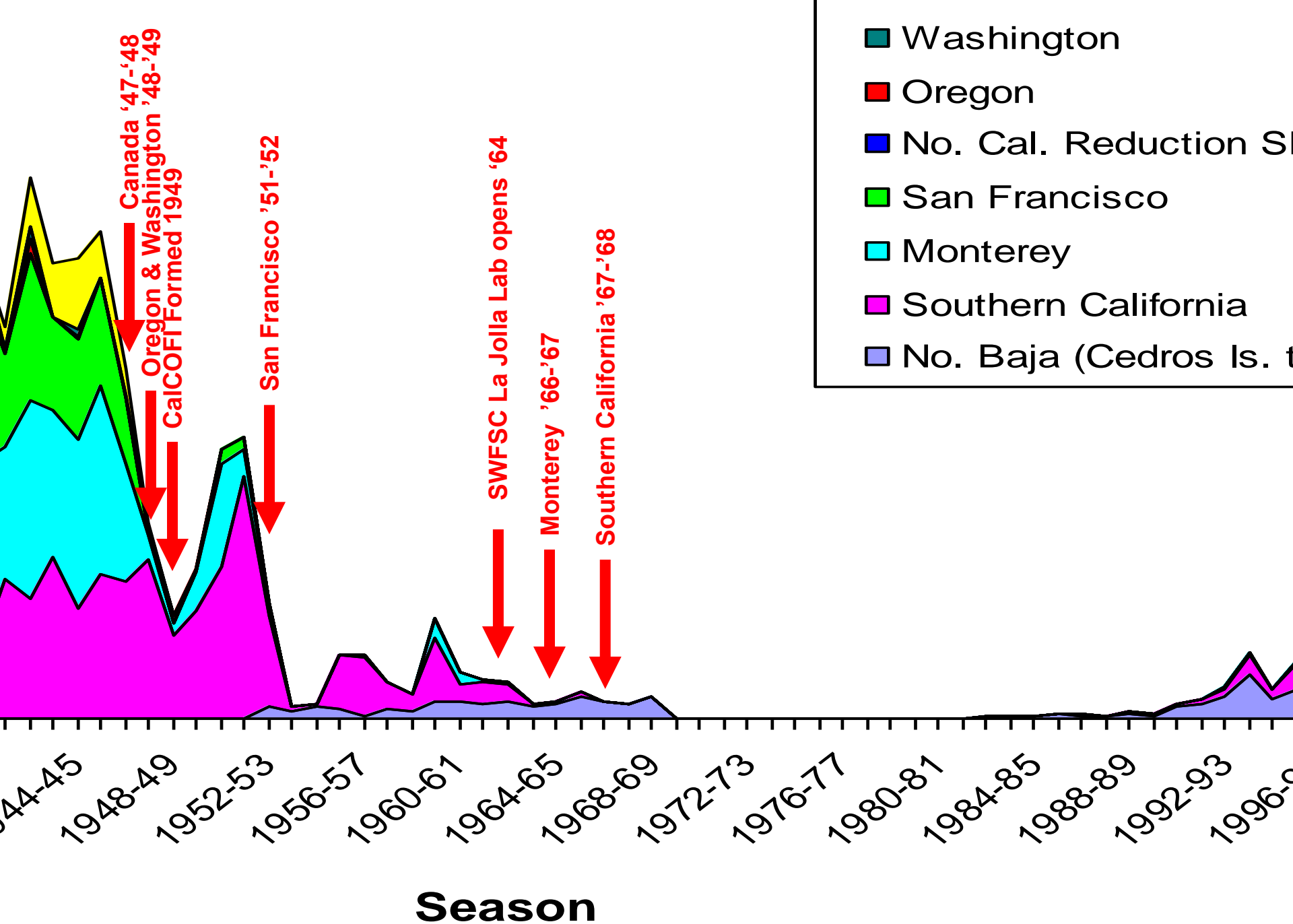
- The Pacific Sardine (*Sardinops sagax caerulea*) fishery was the largest in North America in the 1930s and 1940s with peak landings of over 700,000 metric tons in 1936,
- The fishery developed in response to the demand for food during World War I and extended from southern California to British Columbia,
- Sardine were used for either reduction to fishmeal and oil or canned for human consumption with a small portion taken for live bait.

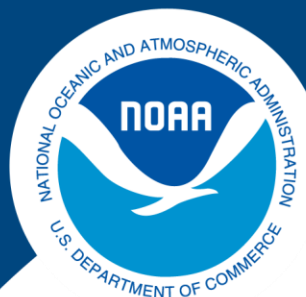




West Coast Landings of Pacific Sardine from 1916/17 to 2008/09



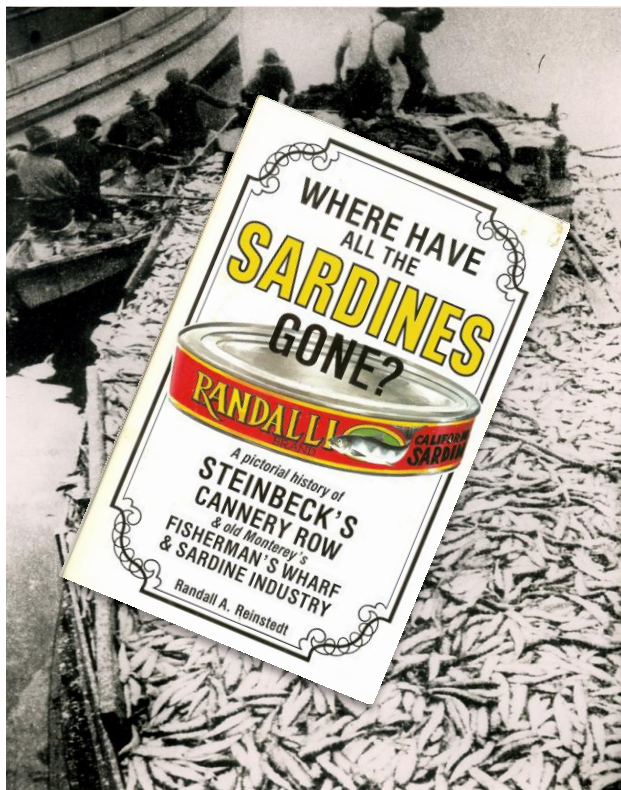


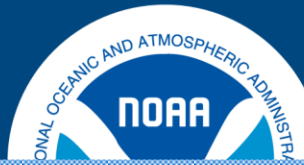


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A Brief History of the West Coast Sardine Fishery:

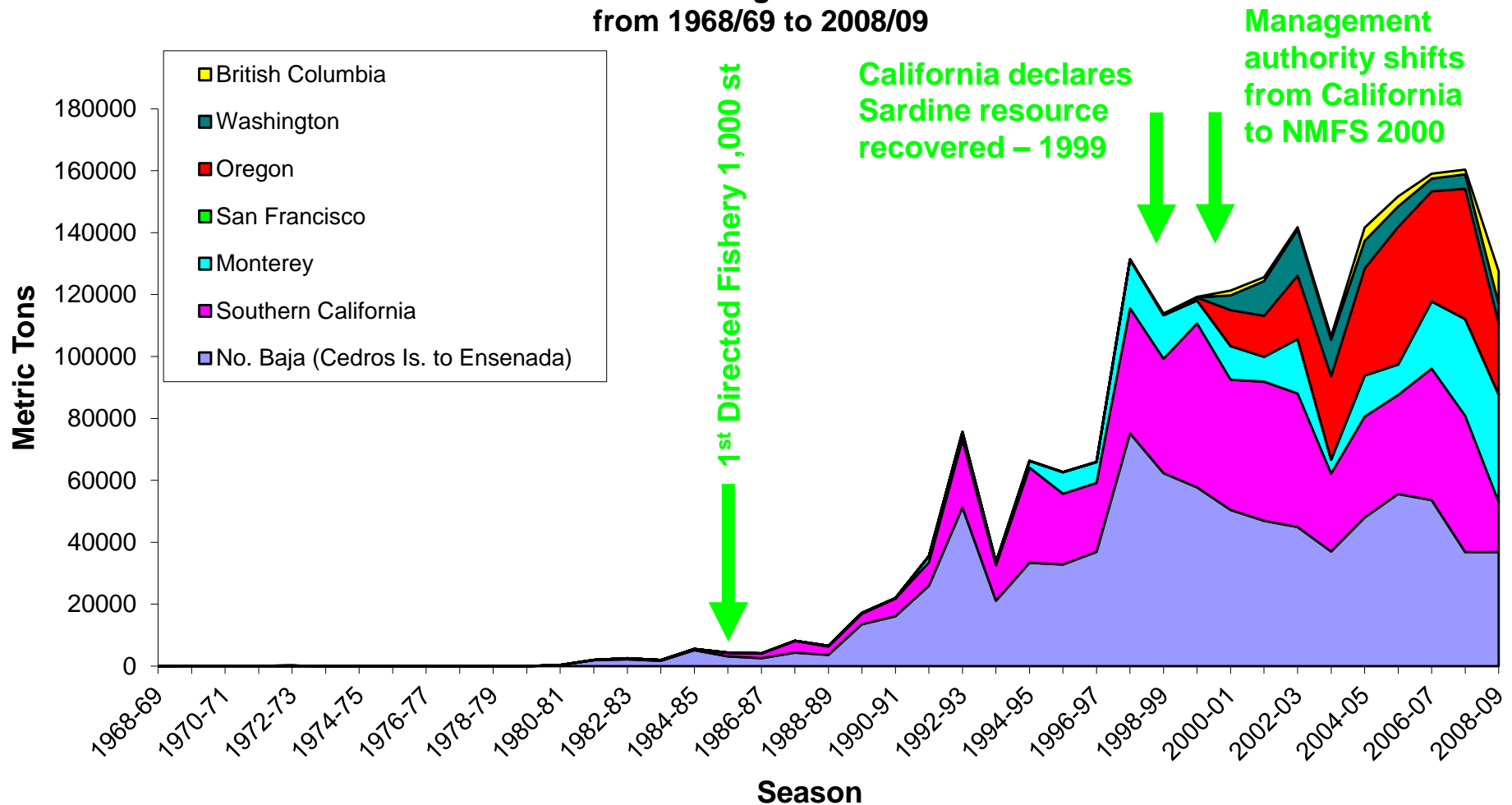
- In 1967, after approximately fifty years of fishing, a moratorium on fishing was imposed by the California Legislature,
- By the time the moratorium was imposed, most of the fisheries along the West Coast had collapsed, even in southern California,
- The recession of landings started from the north and moved southward.





A Brief History of the West Coast Sardine Fishery:

West Coast Landings of Pacific Sardine
from 1968/69 to 2008/09





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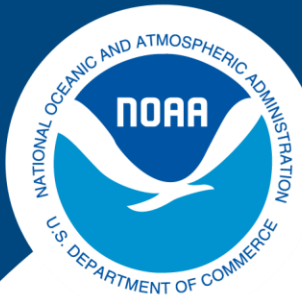
Changes in management with SWFSC CPS assessment responsibilities:

2000 - Amendment 8

Start of Federal Management:

- Annual harvest guideline (HG), quotas, allocations, timing of assessments
- Limited Entry (LE) program
- Management areas – Limited Entry zone of two sub areas (divided by Pt. Piedras Blancas), open access north of Pt. Arena
- Provisions for closing the fishery when HG achieved, incidental allowance, exempted fishing permits, etc.





Changes in management with SWFSC CPS assessment responsibilities:

California:

- Federal Limited Entry Program
 - South of 39° N. latitude (Pt. Arena, CA)
CPS permit (>5mt); 65 permits; 30 vessels in 2011
 - North of 39° N. latitude – Open Access
- Capacity goals and transferability provisions (**Amendment 10**)
- Fleet capacity is calculated on gross tonnage of individual vessels
- No logbook program in place (market squid logbooks required by California)

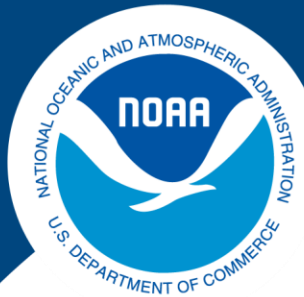
Oregon:

- Managed as a developmental fishery 1999-2005
- State Limited Entry Program established 2005
- 2012 - 25 permits, 21 active vessels
- Logbooks required

Washington:

- Started as a “trial” fishery, changed to an “experimental” fishery in 2003
- State Limited Entry Program established in 2009 (up to 25 permits)
- 2011 – 25 permits issued, 7 active vessels
- Logbooks required



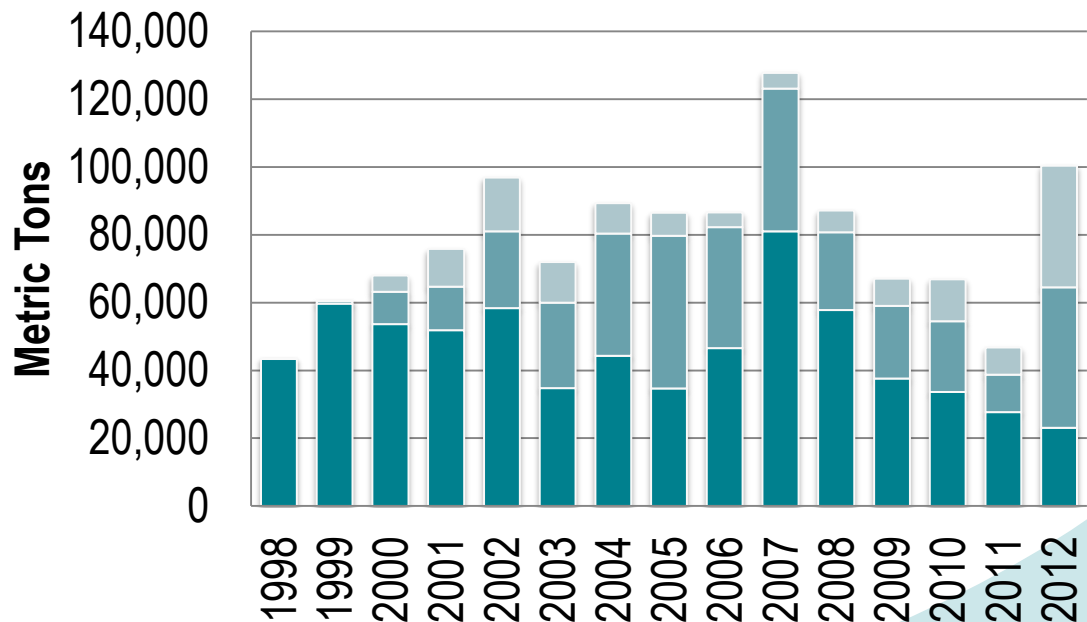
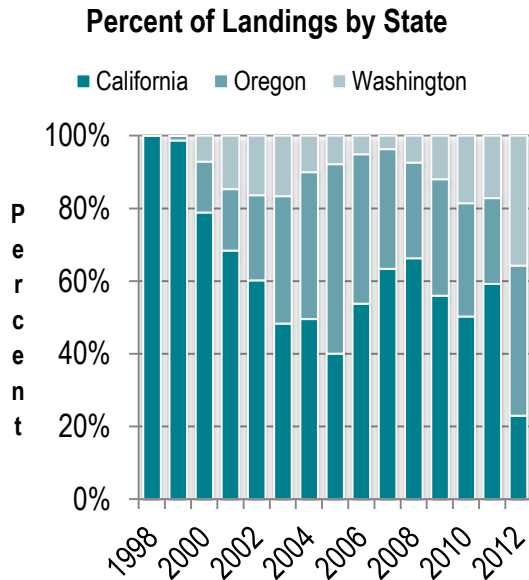


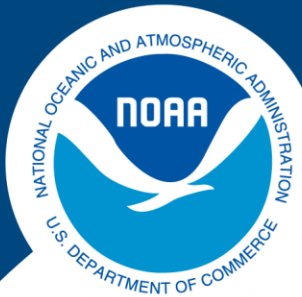
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Changes in management with SWFSC CPS assessment responsibilities:

Pacific Sardine Landings by State

■ California ■ Oregon ■ Washington





Changes in management with SWFSC CPS assessment responsibilities:

2005 - Amendment 11

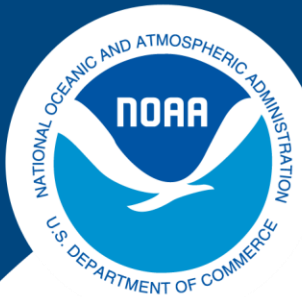
PFMC approves a long-term seasonal allocation program to equitably apportion the available sardine resource along the entire west coast:

- 35% of the HG to be allocated coastwide on January 1
- 40% of the HG, plus any portion not harvested from the initial allocation, to be reallocated coastwide on July 1
- On September 15 the remaining 25% of the HG, plus any portion not harvested from earlier allocations, to be reallocated coastwide.

2006 - Amendment 12

PFMC approves a complete ban on commercial fishing of krill





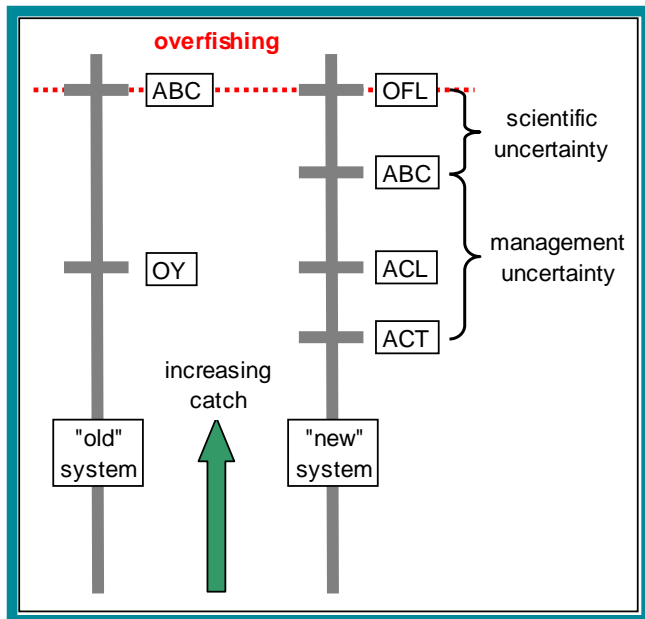
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Changes in management with SWFSC CPS assessment responsibilities:

2010 - Amendment 13

PFMC approves revised Annual Catch Limits and Accountability Rules to conform with National Standards 1 Guidelines of MSA reauthorization:

- Modified existing Harvest Control Rules for Actively managed species to include a buffer for scientific uncertainty
- Maintain the default harvest control rules for monitored stocks as modified to specify the new management reference points.





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Current West Coast Sardine Fishery Management:

CPS fisheries use “roundhaul gear” mainly purse or drum seine vessels for all CPS including sardines, mackerel, tuna and market squid





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- Average age of vessels - 34 years
- Length ranges from 40 to 98 feet
- Gross Tonnage ranges from 23.8 to 340.2, average 88.7
- Fleet GT Capacity = 5,650.9, current = 5,408.4

Current West Coast Sardine Fishery Management:

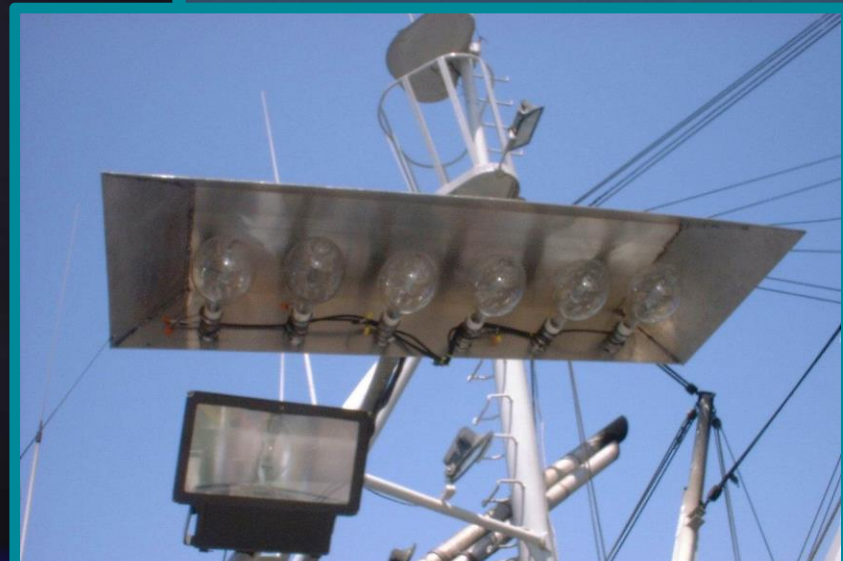


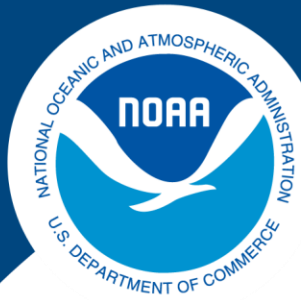
Current Market Squid Fishery:



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- Same purse seines vessels with additional CA squid permit
- Nets are modified to be longer with decrease mesh size
- Lightboats and brail vessels are also permitted
- Incandescent lighting up to 30,000 watts





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Current California Market Squid Fishery Management:

California Market Squid FMP in 2005 implemented regulations to address the following:

Fishery Control Rules

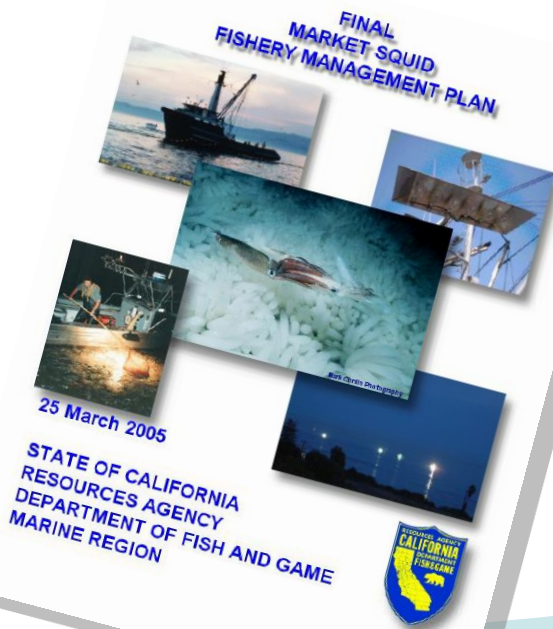
- **Seasonal Catch limit of 107,047 mt (118,000 short tons)**
- **Weekend closures to allow for uninterrupted spawning**
- **Monitoring program** (Egg Escapement) with mandatory logbooks
- **Attracting lights limited to 30,000 watts**, shielded to reduce bird interactions

Restricted Access Program - based on historical participation in the fishery:

- Market squid Vessel Permits: 69 transferable, 8 non-transferable
- Market squid Brail Permits: 42 transferable, 0 non-transferable
- Market squid Light boat permits: 33 transferable, 3 non-transferable

Ecological Concerns

- Seabird closure area restricting the use of attracting lights for commercial purposes in any waters of the Gulf of the Farallones National Marine Sanctuary
- **Additional closure areas to the fishery to protect squid spawning** habitat include the Channel Islands Marine Protected Areas (MPAs) and the newly established MPAs along the central California coast as well areas closed to the use of purse seine gear including the leeward side of Catalina Island, Carmel and Santa Monica Bays.





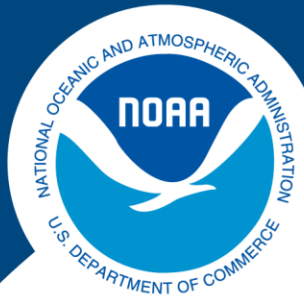
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Who are the collaborators on CPS assessments?



- Western Region, NOAA Fisheries – Regulatory and NEPA responsibilities
- California, Oregon, and Washington continue to monitor the CPS fisheries landings for fishery dependent biological information including:
 - Collection of catch information on a real time basis for allocation monitoring
 - Collection of biological Information: length, weight, Age (otolith aging), sex and maturity, etc.
 - Collection of by-catch and incidental catch information
- Tribal Interests – CPSMT membership
- International Collaborators - Biological and landings information
 - Canada - DFO
 - Mexico-Conapesca, Inapesca

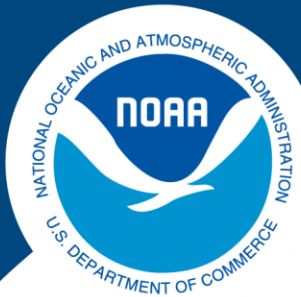


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Who are the clients of the Pacific Fisheries Management Council CPS assessments?

- CPS Fishing Industry which takes an active role in their management (e.g., aerial surveys, squid paralarvae surveys, participation in the Council process),
- International Management Partners (DFO - Canada, CONAPESCA – Mexico),
- University researchers also interested in sustainable fisheries management (e.g., UW, SIO),
- Other interests which value CPS for human consumption and as forage (sport fishers, NGOs, etc.),
- Trinational Sardine Forum (all interested parties)



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Strengths

- Informal exchange of data e.g., Trinational Sardine Forum
- Strong relationships with the CPS fishing industry, partners

Challenges

- Formal transfer of information between international managers
- Continuation of state port sampling programs, especially for monitored species with minimal landings
- Representation in management process, both state and federal

Strategies for Improvement

- Continue formal process with Mexico e.g., MexUS-Pacifico





Questions?



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La Jolla 2-28-2008

